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RAW SEQUENCE LISTING DATE: 08/23/2004
PATENT APPLICATION: US/10/676,873A TIME: 11:15:35

Input Set : A:\COTH-P01-002.TXT

Output Set: N:\CRF4\08232004\J676873A.raw

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4 <110> APPLICANT: Chan, John
         Baynes, Brian
         Zhang, Shengsheng
  8 <120> TITLE OF INVENTION: METHODS OF ENGINEERING SPATIALLY
         CONSERVED MOTIFS IN POLYPEPTIDES
 12 <130> FILE REFERENCE: COTH-P01-002
 14 <140> CURRENT APPLICATION NUMBER: US 10/676,873A
 15 <141> CURRENT FILING DATE: 2003-09-30
 17 <150> PRIOR APPLICATION NUMBER: US 60/414,688
 18 <151> PRIOR FILING DATE: 2002-09-30
 20 <160> NUMBER OF SEQ ID NOS: 4
 22 <170> SOFTWARE: FastSEQ for Windows Version 4.0
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 25 <211> LENGTH: 474
 26 <212> TYPE: DNA
 27 <213> ORGANISM: Artificial Sequence
 29 <220> FEATURE:
 30 <223> OTHER INFORMATION: Nucleotide sequence of TNF alpha chain b mutation
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         b tyr 119 asp
 33 <400> SEQUENCE: 1
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 35 caagetgagg ggcageteca gtggetgaac egeegggeea atgeeeteet ggecaatgge 120
 36 gtggagetga gagataacca getggtggtg ceateagagg geetqtaeet eatetaetee 180
 37 caggteetet teaagggeea aggetgeece teeacceatg tgeteeteae ceacaceate 240
 38 ageogeateg cegtetecta ceagaceaag gteaacetee tetetgeeat caagageeee 300
 39 tgccagaggg agaccccaga gggggctgag gccaagccct gqtatqaqcc catcqatctq 360
 40 ggaggggtct tccagctgga gaagggtgac cgactcagcg ctgagatcaa tcggcccgac 420
 41 tatetegaet ttgeegagte tgggeaggte taetttggga teattgeeet gtga
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44 <211> LENGTH: 157
 45 <212> TYPE: PRT
 46 <213> ORGANISM: Artificial Sequence
48 <220> FEATURE:
49 <223> OTHER INFORMATION: Protein sequence of TNF alpha chain b mutation
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52 <400> SEQUENCE: 2
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54 1
                    .5
                                       10
55 Val Ala Asn Pro Gln Ala Glu Gly Gln Leu Gln Trp Leu Asn Arg Arg
               20
                                   25
57 Ala Asn Ala Leu Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln Leu
59 Val Val Pro Ser Glu Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu Phe
```

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```
60
61 Lys Gly Gln Gly Cys Pro Ser Thr His Val Leu Leu Thr His Thr Ile
63 Ser Arg Ile Ala Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser Ala
64
   Ile Lys Ser Pro Cys Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala Lys
               100
                                    105
67 Pro Gln Tyr Glu Pro Ile Asp Leu Gly Gly Val Phe Gln Leu Glu Lys
68
           115
                                120
                                                    125
69 Gly Asp Arg Leu Ser Ala Glu Ile Asn Arg Pro Asp Tyr Leu Leu Phe
70
       130
                           135
71 Ala Glu Ser Gly Gln Val Tyr Phe Gly Ile Ile Ala Leu
72 145
                       150
75 <210> SEQ ID NO: 3
76 <211> LENGTH: 474
77 <212> TYPE: DNA
78 <213> ORGANISM: Artificial Sequence
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81 <223> OTHER INFORMATION: Nucleotide sequence of TNF alpha chain c mutations
82
         c_tyr 119 his, c tyr 59 ser
84 <400> SEQUENCE: 3
85 gtcagatcat cttctcgaac cccgagtgac aagcctgtag cccatgttgt agcaaaccct 60
86 caagetgagg ggcageteea gtggetgaac egeegggeea atgeeeteet ggeeaatgge 120
87 gtggagctga gagataacca gctggtggtg ccatcagagg gcctgtacct catcagttcc 180
88 caggicetet teaagggeea aggetgeece tecacecatg tgeteeteac ceacaceate 240
89 agccgcatcg ccgtctccta ccagaccaag gtcaacctcc tctctgccat caagagcccc 300
90 tgccagaggg agaccccaga gggggctgag gccaagccct ggtatgagcc catccatctg 360
91 ggaggggtet tecagetgga gaagggtgae egaeteageg etgagateaa teggeeegae 420
92 tatctcgact ttgccgagtc tgggcaggtc tactttggga tcattgccct gtga
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96 <212> TYPE: PRT
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106 Val Ala Asn Pro Gln Ala Glu Gly Gln Leu Gln Trp Leu Asn Arq Arq
107
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108 Ala Asn Ala Leu Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln Leu
110 Val Val Pro Ser Glu Gly Leu Tyr Leu Ile Ser Ser Gln Val Leu Phe
111
                            55
112 Lys Gly Gln Gly Cys Pro Ser Thr His Val Leu Leu Thr His Thr Ile
114 Ser Arg Ile Ala Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser Ala
115
```

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116	Ile	Lys	Ser	Pro	Cys	Gln	Arg	Glu	Thr	Pro	Glu	Gly	Ala	Glu	Ala	Lys
117			•	100					105					110		
118	р́го	${\tt Gln}$	Tyr	Glu	Pro	Ile	His	Leu	Gly	Gly	Val	Phe	Gln	Leu	Glu	Lys
119			115					120					125			
120	Gly	Asp	Arg	Leu	Ser	Ala	Glu	Ile	Asn	Arg	Pro	Asp	Tyr	Leu	Leu	Phe
121		130					135				•	140	_			
122	Ala	Glu	Ser	Gly	${\tt Gln}$	Val	Tyr	Phe	Gly	Ile	Ile	Ala	Leu			
123	145					150					155					

VERIFICATION SUMMARY

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